

**UTAH WING CIVIL AIR PATROL
CESSNA 182, TR182, & MAULE
ANNUAL/100 HOUR INSPECTION GUIDE**

DATE: _____

AIRCRAFT N _____

MAKE/MODEL _____

SERIAL NO. _____

ENGINE MAKE/MODEL _____

ENGINE SERIAL NO. _____

AIRCRAFT TACH/HOBBS _____ / _____

DATE COMPLETED _____

AGENCY PERFORMING INSPECTION

AUTHORIZED TECHNICIAN

LICENSE NUMBER

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MECHANIC/INSPECTOR

FUSELAGE

1. Fuselage Surface - Inspect for skin damage, loose rivets, condition of paint, and check pitot-static ports and drain holes for obstruction.
Inspect covers and fairings for security. _____
2. Fuselage-Mounted Equipment - Check for general condition and security of attachment. _____
3. Antennas and Cables - Inspect for security of attachment, connection, and condition. _____
4. Remote Mounted Avionics - Inspect for security of units and electrical connectors, condition and security of wire routing. Also check for evidence of damage and cleanliness. _____
5. Fuel System - Inspect plumbing and components for mounting and security. _____
6. Fuel Line and Selector Valve Drains - Remove plug & drain. _____
7. External Power Receptacle and Power Cables - Inspect for condition and security. _____
8. Wheel Fairings, Strut Fairings and Cuffs - Inspect for cracks, dents and condition of paint. _____
9. Main Landing Gear Structure - Check for security of attachment and structure for cracks, loose rivets, bolts, and nuts, or damage. _____
10. Main Gear Tube - Inspect cracks, dents, corrosion, or other damage. Check condition of paint and axles for damage and security. _____
11. Static System - Inspect for security of installation, cleanliness, and evidence of damage. _____
12. Emergency Locator Transmitter - Inspect for security of attachment and check operation by verifying transmitter output. Check cumulative time and useful life of batteries in accordance with FAR. _____
13. Battery - Check general condition and security. Check level of electrolyte. _____
14. Battery Box and Cables - Clean and remove any corrosion. Check cables for routing, support, and security of connections. _____
15. Elevator Trim Tab Stop Blocks - Inspect for damage and security. _____
16. Metal Lines, Hoses, Clamps, and Fittings - Check for leaks, condition, & security. Check for proper routing & support. _____

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CESSNA 182, TR182, & MAULE

ANNUAL/100 HOUR INSPECTION GUIDE

MECHANIC/INSPECTOR

17. Internal Fuselage Structure - Inspect bulkheads, doorposts, stringers, doublers, and skins for corrosion, cracks, buckles, and loose rivets, bolts and nuts. _____
18. Oxygen System - Inspect masks, hoses, lines, and fittings for condition, routing and support. _____
Test operation and check for leaks. _____
19. General Airplane and System Wiring - Inspect for proper routing, chafing, broken or loose terminals, general condition, broken or inadequate clamps and sharp bends in wiring. _____

CABIN

1. Control Wheel Lock - Check security and operation. _____
2. Flight Controls - Check freedom of movement and proper operation through full travel with and without flaps extended. _____
Check electric trim controls for operation. _____
3. Control Column - Inspect pulleys, cables, sprockets, bearings, chains, bungees, & turnbuckles for condition & security. _____
4. Elevator Control - Check freedom of movement and proper operation through full travel with & without flaps extended. _____
5. Trim Control and Indicator - Check freedom of movement and proper operation through full travel. _____
6. Seats, Seat Belts, and Shoulder Harnesses - Check general condition and security. Check operation of seat stops and adjustment mechanism. Inspect belts for condition and security of fasteners. _____
7. Pilots and Copilots Inertia Reels - Inspect for security of installation, proper operation, & evidence of damage. _____
8. Seat Tracks and Seat Stops - Inspect seat tracks for condition and security of installation. Check seat track stops for damage and correct location. _____
9. Rudder Pedals and Linkage - Check for general condition, proper rigging & operation. Check for security of attachment. _____
10. Portable Hand Fire Extinguisher - Inspect for proper operating pressure, condition, security of installation, servicing date. _____
11. Fuel Selector Valve - Check controls for detente in each position, security of attachment, & proper placing. _____

UTAH WING CIVIL AIR PATROL

CESSNA 182, TR182, & MAULE

ANNUAL/100 HOUR INSPECTION GUIDE

MECHANIC/INSPECTOR

12. Windows, Windshield, Doors, and Seals - Inspect general condition. Check latches, hinges, and seals for condition. _____
13. Placards and Decals - Inspect presence, legibility and security. Consult Pilot's Operating Handbook and FAA-approved Airplane Flight Manual for required placards. _____
14. Magnetic Compass - Inspect for security of installation, cleanliness, and evidence of damage. _____
15. Cabin Heat and Ventilation Controls - Check freedom of movement through full travel. Check friction locks for proper operation. _____
16. Heater Components, Inlets, and Outlets - Inspect all lines, connections, ducts, clamps, seals and gaskets for condition, restriction and security. _____
17. Wing Flap Control - Check operation through full travel and observe Flap Position Indicator for proper indication. _____
18. Engine, Propeller Control, and Linkage - Check general condition, freedom of movement through full range. Check for proper travel, security of attachment, and for evidence of wear. Check friction locks for proper operation. _____
19. Ignition Switch and Electrical Harness - Inspect for damage, condition and security. _____
20. Cowl Flap Controls - Check freedom of movement through full travel. _____
21. Instrument Panel and Control Pedestal - Inspect wiring, mounting, and terminals for condition and security. Check resistance between stationary panel and instrument panel for proper ground. _____
22. Instrument Panel Shock Mounts, Ground Straps, and Covers - Inspect for deterioration, cracks and security of attachment. _____
23. Instrument Lines, Fittings, Ducting, and Instrument Panel Wiring - Check for proper routing, support, and security of attachment. _____
24. Switches - Check operation, terminals, wiring, and mounting for condition, security, and interference. _____
25. Circuit Breakers and Fuses - Check operation and condition. Check for require number of spare fuses. _____
26. Switch and Circuit Breaker Panel, Terminal Blocks and Junction Boxes - inspect wiring and terminals for condition & security. _____

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CESSNA 182, TR182, & MAULE

ANNUAL/100 HOUR INSPECTION GUIDE

MECHANIC/INSPECTOR

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| 27. | Instrument - Check general condition and markings for legibility. | |
| 28. | Instrument, Cabin, Navigation, Beacon, Strobe, and Landing Lights - Check operation, condition of lens and security of attachment. | |
| 29. | Navigation Indicators, Controls, and Components - Inspect for condition and security. | |
| 30. | Instrument Panel Mounted Avionics Units (Including Audio Panel, VHF Nav/Coms, ADF, Transponder, DME, and Compass System - Inspect for deterioration, cracks, and security of instrument panel mounts.
Inspect for security of electrical connections, condition, and security of wire routing. | |
| 31. | Avionics Operating Controls - Inspect for security and proper operation of control switches and ensure that all digital segments will illuminate properly. | |
| 32. | Microphone, Headsets and Jacks - Inspect for cleanliness, security, and evidence of damage. | |
| 33. | Vacuum System - Inspect for condition and security. | |
| 34. | Vacuum System Hoses - Inspect for condition & security. | |
| 35. | Vacuum System Relief Valve - Inspect condition/ security. | |
| 36. | Vacuum System Air Filter - Inspect for damage, deterioration, and contamination. Clean or replace, if required. | |
| 37. | Oxygen System - Inspect masks, hoses, lines, and fittings for condition, routing, and support. Test operation and check for leaks. | |
| 38. | General Airplane and System Wiring - Inspect for proper routing, chafing, broken or inadequate clamps, and sharp bends in wiring. | |

ENGINE

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|----|--|--|
| 1. | Cowling and Cowl Flaps - Inspect for cracks, dents, & other damage, security of cowl fasteners, and cowl mounted landing lights for attachment. Check cowl flaps for condition, security, and operation. | |
| 2. | Engine - Inspect for evidence of oil and fuel leaks. Wash engine and check for security of accessories. | |
| 3. | Induction System - Check security of clamps, tubes, and ducting. | |

UTAH WING CIVIL AIR PATROL

CESSNA 182, TR182, & MAULE

ANNUAL/100 HOUR INSPECTION GUIDE

MECHANIC/INSPECTOR

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| 4. | Induction Airbox, Valves, Doors and Controls - Remove air filter and inspect hinges, doors, seals & attaching parts for wear and security. Check operation. Clean and inspect air filter. | _____ |
| 5. | Induction Air Filter - Remove and clean. Inspect for damage and replace paper filters each 500 hours. | _____ |
| 6. | Alternate Induction Air System - Check for obstructions, operation, and security. | _____ |
| 7. | Oil Cooler - Check for obstructions, leaks, and security of attachment. | _____ |
| 8. | Magnets - Check external condition, security and electrical leads for condition. Check timing and adjust if necessary. | _____ |
| 9. | Engine Baffles and Seals - Check condition and security of attachment. | _____ |
| 10. | Alternator and Electrical Connections - Check condition and security. Check alternator belts for condition and proper adjustment. | _____ |
| 11. | Alternator Control Unit - Inspect wiring, mounting, condition, and wire routing. | _____ |
| 12. | Firewall Structure - Inspect for wrinkles, damage, cracks, sheared rivets, etc. Check cowl shock mounts for condition and security. | _____ |
| 13. | Engine Shock Mounts, Engine Mount Structure, and Ground Straps - Check condition, security, and alignment. | _____ |
| 14. | Exhaust System - Inspect for cracks and security. Air leak check exhaust system. | _____ |
| 15. | Heater Components - Inspect all components for condition and security. | _____ |
| 16. | Vacuum Pump - Check for condition and security. Check vacuum system breather line for obstructions, condition, and security. | _____ |
| 17. | Fuel Strainer, Drain Valve, and Controls - Check freedom of movement, security, and proper operation. | _____ |
| 18. | Auxiliary (Electric) Fuel Pump - Check pump and fittings for condition, operation and security. Remove and clean filter (if applicable). | _____ |
| 19. | Engine-Driven Fuel pump - Check for evidence of leakage, security of attachment, and general condition. | _____ |
| 20. | Ignition Harness and Insulators - Check for proper routing, deterioration, and condition of terminals. | _____ |

UTAH WING CIVIL AIR PATROL

CESSNA 182, TR182, & MAULE

ANNUAL/100 HOUR INSPECTION GUIDE

MECHANIC/INSPECTOR

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| 21. | Spark Plugs - Remove, clean, analyze, test, gap, and rotate top to bottom - bottom to top. | |
| 22. | Carburetor - Drain and flush bowl and clean inlet strainer. Check condition and security. | |
| 23. | Engine Oil Change - Drain oil sump, remove oil filter and inspect for foreign materials, replace filter. Fill oil sump with proper grade and quantity of oil. | |
| 24. | Engine Primer - Check for leakage, operation, & security. | |
| 25. | Crankcase, Oil Sump, and Accessory Section - Inspect for cracks and evidence of oil leakage. Check bolts & nuts for looseness & re-torque as necessary. Check crankcase breather lines for obstructions, security, gen. condition. | |
| 26. | Hoses, Metal Lines & Fittings - Inspect for signs of oil & fuel leaks. Check for abrasions, chafing, security, proper routing, support & evidence of deterioration. | |
| 27. | Cold and Hot Air Hoses - Check condition, routing, and security. | |
| 28. | Engine Cylinders, Rocker Box Cover, and Pushrod Housings - Check for fin damage, cracks, oil leaks, security of attachment, and general condition. | |
| 29. | Cylinder Compression - Perform differential compression test and record: 1. /80 2. /80 3. /80
4. /80 5. /80 6. /80 | |

PROPELLER

- | | | |
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| 1. | Spinner - Check general condition and attachment. | |
| 2. | Spinner and Bulkhead - Remove spinner, wash, and inspect for cracks and fractures. | |
| 3. | Propeller Blades - Inspect for cracks, dents, nicks, scratches, erosion, corrosion, and other damage. | |
| 4. | Propeller Mounting - Check for security of installation. | |
| 5. | Propeller Mounting Bolts/Nuts - Inspect for signs of looseness. Retorque bolts/nuts as necessary. | |
| 6. | Propeller Governor and Control - Inspect for oil and grease leaks. | |
| 7. | Propeller Governor and Control - Check for security and operation of controls. | |
| 8. | Propeller Hub - Check general condition. | |

UTAH WING CIVIL AIR PATROL

CESSNA 182, TR182, & MAULE

ANNUAL/100 HOUR INSPECTION GUIDE

MECHANIC/INSPECTOR

WINGS

1. Wing Surfaces and Tips - Inspect for skin damage, loose rivets, and condition of paint. _____
2. Placards and Decals - Inspect presence, legibility, and security. Consult Pilot's Operating Handbook and FAA-Approved Airplane Manual for required placards. _____
3. Wing Access Plates - Check for damage and security of installation. _____
4. Wing Struts and Strut Fairings - Check for dents, cracks, loose screws and rivets, and condition of paint. _____
5. Wing Spar and Wing Strut Fittings - Check for evidence of wear. Check attach bolt for indications of looseness and re-torque as necessary. _____
6. Fuel Tank or Bladder Drains - Drain water and sediment. _____
7. Pitot Tube and Stall Warning Vane - Check for condition and obstructions. _____
8. Pitot Tube and Stall Warning Heaters (if installed) - Perform operational check. _____
9. Fuel Tank Vent Lines and Vent Valves - Check vents for obstruction & proper positioning. Check valves for operation. _____
10. Aileron Structure, Control Rods, Hinges, Balance, Weights, Bellcranks, Linkage, Bolts, Pulleys, and Pulley Brackets - Check condition, operation, and security of attachment. _____
11. Ailerons and Hinges - Check condition, security, operation. _____
12. Ailerons and Cables - Check operation and security of stops. Check cables for tension, routing, fraying, corrosion, and turnbuckle safety. Check travel if cable tension requires adjustment or if stops are damaged. Check fairleads and rub strips for condition. _____
13. Aileron Controls - Check freedom of movement and proper operation through full travel with & without flaps extended. _____
14. Flap Structure, Linkage, Bellcranks, Pulleys, and Pulley Brackets - Check for condition, operation, and security. _____
15. Flaps and Cables - Check cables for proper tension, routing, fraying, corrosion, and turnbuckle safety. _____
16. Flap Motor, Actuator, and Limit Switches - Check wiring and terminals for condition and security. _____

UTAH WING CIVIL AIR PATROL

CESSNA 182, TR182, & MAULE

ANNUAL/100 HOUR INSPECTION GUIDE

MECHANIC/INSPECTOR

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| 17. | Flaps - Check tracks, rollers, and control rods for security of attachment. Check operation. | _____ |
| 18. | Flap Actuator Threads - Clean and lubricate. | _____ |
| 19. | Fuel System - Inspect plumbing and components for mounting and security. | _____ |
| 20. | Fuel Bladders - Check for leaks and security, condition of fuel caps, adaptors, and placards. | _____ |
| 21. | Integral Fuel Tanks - Check for evidence of leakage and condition of fuel caps and placards. | _____ |
| 22. | Metal Lines, Hoses, Clamps, and Fittings - Check for leaks, condition, and security. Check for proper routing and support. | _____ |
| 23. | Wing Structure - Inspect spars, ribs, skins, and stringers for cracks, wrinkles, loose rivets, corrosion, or other damage. | _____ |
| 24. | General Airplane and System Wiring - Inspect for proper routing, chafing, broken or inadequate clamps, and sharp bends in wiring. | _____ |

LANDING GEAR

- | | | |
|----|---|-------|
| 1. | Nose Gear Attachment Structure - Inspect for cracks, corrosion, or other damage. Check for security of attachment. | _____ |
| 2. | Nose Gear - Inspect torque links, steering rods and boots for condition and security of attachment. Check strut for evidence of leakage and proper extension. Check strut barrel for corrosion, pitting and cleanliness. Check shimmy dampener for operation, leakage, and attach points for wear and security. | _____ |
| 3. | Nose Gear Fork - Inspect for cracks, general condition, and security of attachment. | _____ |
| 4. | Nose Gear Steering Mechanism - Check for wear, security, and proper rigging. | _____ |
| 5. | Tires - Check tread wear and general condition. Check proper inflation. | _____ |
| 6. | Wheels, Brake Discs, and Linings - Inspect for wear, cracks, warps, dents, or other damage. Check wheel through bolt and nuts for evidence of looseness. | _____ |
| 7. | Brakes, Master Cylinders, and Parking Brake - Check master cylinder and parking brake mechanism for condition and security. Check fluid level and test operation. | _____ |
| 8. | Brakes - Test toe brakes & parking brake for proper operation. | _____ |

UTAH WING CIVIL AIR PATROL

CESSNA 182, TR182, & MAULE

ANNUAL/100 HOUR INSPECTION GUIDE

MECHANIC/INSPECTOR

EMPENNAGE

1. Vertical and Horizontal Stabilizers, Tips, and Tailcone - Inspect externally for skin damage and condition of paint. _____
2. Vertical and Horizontal Stabilizers and Tailcone Structure - Inspect bulkheads, spars, ribs, and skins for cracks, wrinkles, loose rivets, corrosion or other damage. Inspect vertical and horizontal stabilizer attach bolts for looseness. Re-torque as necessary. Check security of inspection covers, fairings, and tips. _____
3. Elevator, Hinges, and Cable Attachment - Check condition, security, and operation. _____
4. Elevator Trim Tab and Hinges - Check condition security and operation. _____
5. Elevator Trim Tab Actuator - Check free play limits. _____
6. Elevator/Rudder Downspring - Check structure, bolts, linkage, bellcranks, pulleys, turnbuckles, fairleads, rub strips, etc. for proper routing, condition, and security. _____
7. Elevator/Rudder Downspring - Check structure, bolts, linkage, bellcrank, and push- pull tube for condition, operation, and security. Check cables for tension, routing, fraying, corrosion, and turnbuckle safety. Check travels if cables require tension adjustment or if stops are damaged. _____
8. Rudder - Inspect the rudder skins for cracks and loose rivets, rudder hinges for condition, cracks and security; hinge bolts, hinge bearings, hinge attach fittings, and bonding jumper for evidence of damage and wear, failed fasteners, and security. Inspect the rudder hinge bolts for proper safetying of nuts with cotter pins. Inspect balance weight for looseness and supporting structure for damage. _____
9. Rudder, Tips, Hinges and Cable Attachment - Check condition, security, and operation. _____
10. Elevator Control System - Inspect pulleys, cables, sprockets, bearings, chains & turnbuckles for condition, security, & operation. _____
11. Rudder - Check internal surfaces for corrosion, condition of fasteners, and balance weight attachment. _____
12. General Airplane and System Wiring - Inspect for proper routing, chafing, broken or loose terminals, general condition, broken or inadequate clamps, and sharp bends in wiring. _____

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CESSNA 182, TR182, & MAULE
ANNUAL/100 HOUR INSPECTION GUIDE**

MECHANIC/INSPECTOR

SPECIAL INSPECTION ITEMS

1. Check and accomplish all special inspection items due. _____
2. Vacuum airplane interior carpets and seats. _____
3. Wash airplane exterior and clean all windows. _____
4. Have invoice completed and itemized when airplane is
ready for pickup. _____

POST INSPECTION

1. Replace all fairings, doors, floorboard, and wing access covers. Ground
check engine, alternator charging rate (28 volts min.), oil pressure/
temp. fuel flow indicator, fuel quantity indicator, flight
instruments, and general operating components. _____

SERVICE BULLETINS/AIRWORTHINESS DIRECTIVES

1. Check that all applicable Cessna Service Bulletins,
Service Newsletters, and Supplier Service Notes are
complied with. _____
2. Check that all applicable Airworthiness Directives and
Federal Aviation Regulations are complied with. _____
3. Ensure all Maintenance Record Entries required by Federal
Aviation Regulations are completed before returning the
airplane to Service. _____

**CIVIL AIR PATROL MAINTENANCE PERSONNEL AT
AIRPLANE PICK-UP**

1. Check for completion of inspection check list, and proper
log book endorsement in each log book. _____
2. Check for headsets, fire extinguisher, first aid kit, tie down
ropes, and chocks. _____
3. Perform thorough preflight of entire airplane. _____
4. Perform operational and check flight of airplane prior to
return to service. _____
5. Inform required personnel as to the status of the airplane. _____